

(12)特許協力条約に基づいて公開された国際出願

(19)世界知的所有権機関  
国際事務局(43)国際公開日  
2004年1月15日 (15.01.2004)

PCT

(10)国際公開番号  
WO 2004/004949 A1(51)国際特許分類<sup>7</sup>: B22D 17/00, 17/20, 17/22

愛知県 刈谷市 豊田町2丁目1番地 株式会社豊田自動織機内 Aichi (JP). 吉田 義治 (YOSHIDA,Yoshiharu) (JP/JP); 〒448-8671 愛知県 刈谷市 豊田町2丁目1番地 株式会社豊田自動織機内 Aichi (JP).

(21)国際出願番号: PCT/JP2002/006739

(74)代理人: 曽我 道照, 外 (SOGA,Michiteru et al.); 〒100-0005 東京都 千代田区 丸の内三丁目1番1号 国際ビルディング 8階 曽我特許事務所 Tokyo (JP).

(22)国際出願日: 2002年7月3日 (03.07.2002)

(25)国際出願の言語: 日本語

(81)指定国(国内): CN, KR, US.

(71)出願人(米国を除く全ての指定国について): 株式会社豊田自動織機 (KABUSHIKI KAISHA TOYOTA JIDOSHOKKI) [JP/JP]; 〒448-8671 愛知県 刈谷市 豊田町2丁目1番地 Aichi (JP).

(84)指定国(広域): ヨーロッパ特許 (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR).

(72)発明者; および

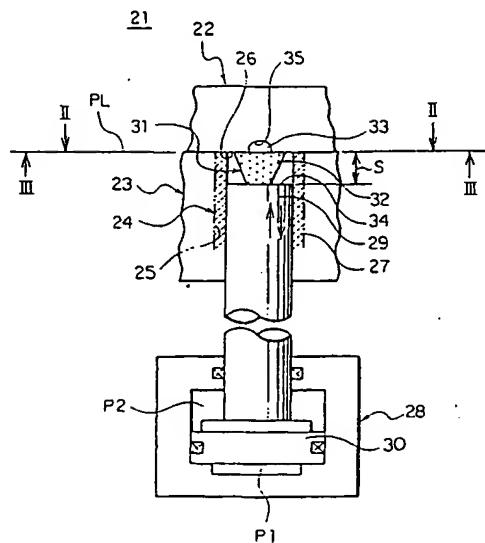
(75)発明者/出願人(米国についてのみ): 井川 成彦 (IKAWA,Narihiko) [JP/JP]; 〒448-8671 愛知県 刈谷市 豊田町2丁目1番地 株式会社豊田自動織機内 Aichi (JP). 富士田 義夫 (FUJITA,Yoshio) [JP/JP]; 〒448-8671

添付公開書類:  
— 国際調査報告書

2文字コード及び他の略語については、定期発行される各PCTガゼットの巻頭に掲載されている「コードと略語のガイドスノート」を参照。

(54)Title: DIE CAST MOLD

(54)発明の名称: ダイカスト用金型



(57)Abstract: A die cast mold capable of increasing the positional accuracy of a going in/out member to correctly determine the flow channel area of a gate. A die cast mold (21) has a first mold (22) and a second mold (23). The first mold is provided with a cylinder (24) through which a gate (31) extends. A rod (29) is disposed in the cylinder in such a manner that it is capable of making stroke motion. The gate consists of a main flow channel portion (32) and a smallest flow channel portion (33). The smallest flow channel of the gate consists of a smallest flow channel portion defined by the end surface (34) of the rod and the concave surface (35) of a mating surface (P) when the rod abuts against the mating surface (P).

WO 2004/004949 A1



## (57) 要約:

出入部材の位置決め精度を高めゲートの流路面積を正確に確定することができる、ダイカスト用金型を提供することを課題とする。

ダイカスト用金型21は第1金型22及び第2金型23を備えている。第1金型には、ゲート31が貫通しているシリンダ24が設けられている。シリンダ内にはロッド29がストローク可能に配置されている。ゲートは、メイン流路部分32と最小流路部分33とからなる。ゲートの最小流路は、ロッドが合せ面Pに突き当たったときに、ロッドの端面34と合せ面の凹面35とによって画定される最小流路部分よりなる。

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP02/06739

A. CLASSIFICATION OF SUBJECT MATTER  
Int.Cl<sup>7</sup> B22D17/00, 17/20, 17/22

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl<sup>7</sup> B22D17/00, 17/20, 17/22

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1922-1996	Toroku Jitsuyo Shinan Koho	1994-2002
Kokai Jitsuyo Shinan Koho	1971-2002	Jitsuyo Shinan Toroku Koho	1996-2002

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 9-99354 A (Kabushiki Kaisha Arutekkusu), 15 April, 1997 (15.04.97), Page 2, left column, lines 2 to 6; Fig. 2 (Family: none)	1
Y	JP 2-187242 A (Ube Industries, Ltd.), 23 July, 1990 (23.07.90), Page 3, upper left column, line 15 to upper right column, line 7; Fig. 1 (Family: none)	1
A	US 6001296 A (The Whitaker Corp.), 14 December, 1999 (14.12.99), Full text; Figs. 2 to 3 & JP 2001-518855 A & DE 19882222 T	1-4

 Further documents are listed in the continuation of Box C. See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international search  
03 September, 2002 (03.09.02)Date of mailing of the international search report  
17 September, 2002 (17.09.02)Name and mailing address of the ISA/  
Japanese Patent Office

Authorized officer